

Antenna specification

Project Name: 2.4/5.8G white L-shaped flat antenna

Product Spec: 2.4/5.8G L type flat antenna, IPEX-1
terminal, 1.13 gray Color wire, wire length 250MM,
105MM white shell

REV: V2.0

Date: 2025.04.29

drawing	check	 approved
Zhu Yongjian	Wang Yumei	Jiang Zhenhua

Project change records

edition	date	engineer	revise content
V1.0	2025.3.27	Zhu Yongjian	Initial version
V2.0	2025.4.29	Zhu Yongjian	refresh data; update data

Testing Equipment and Principle

1. instrumentation:

Network Analyzers :

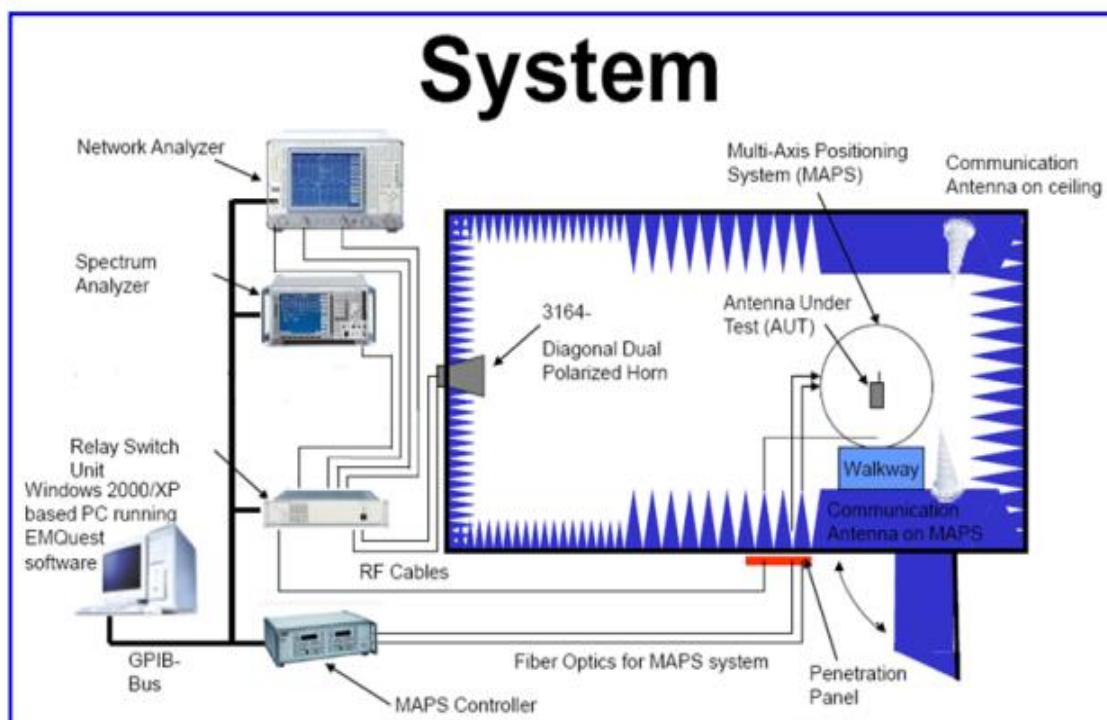
Agilent 8753D 5071B

Communications Test Set:

Agilent E5515C

3D Chamber Test System:

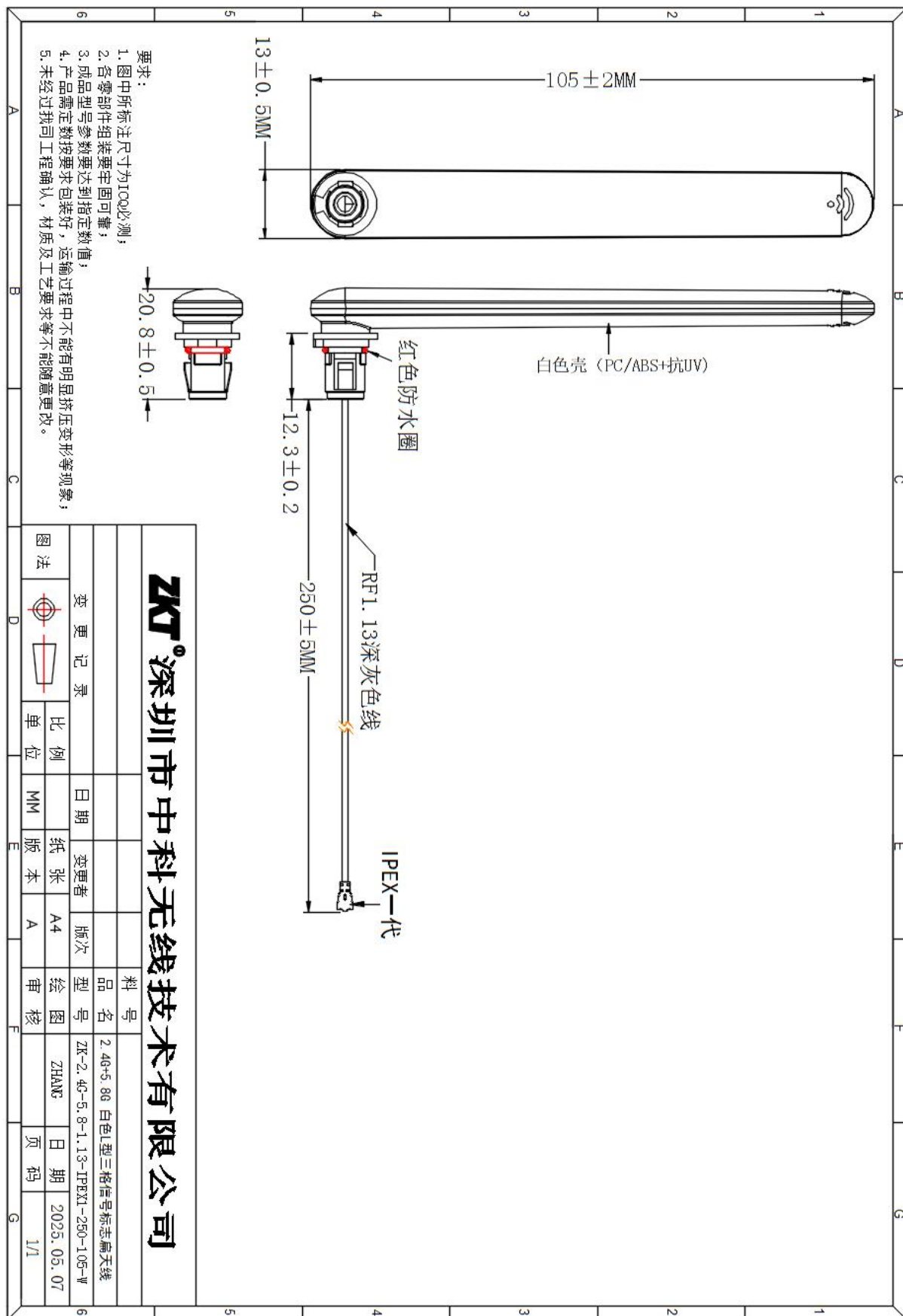
2. Principle of testing:



一、Electrical and mechanical properties

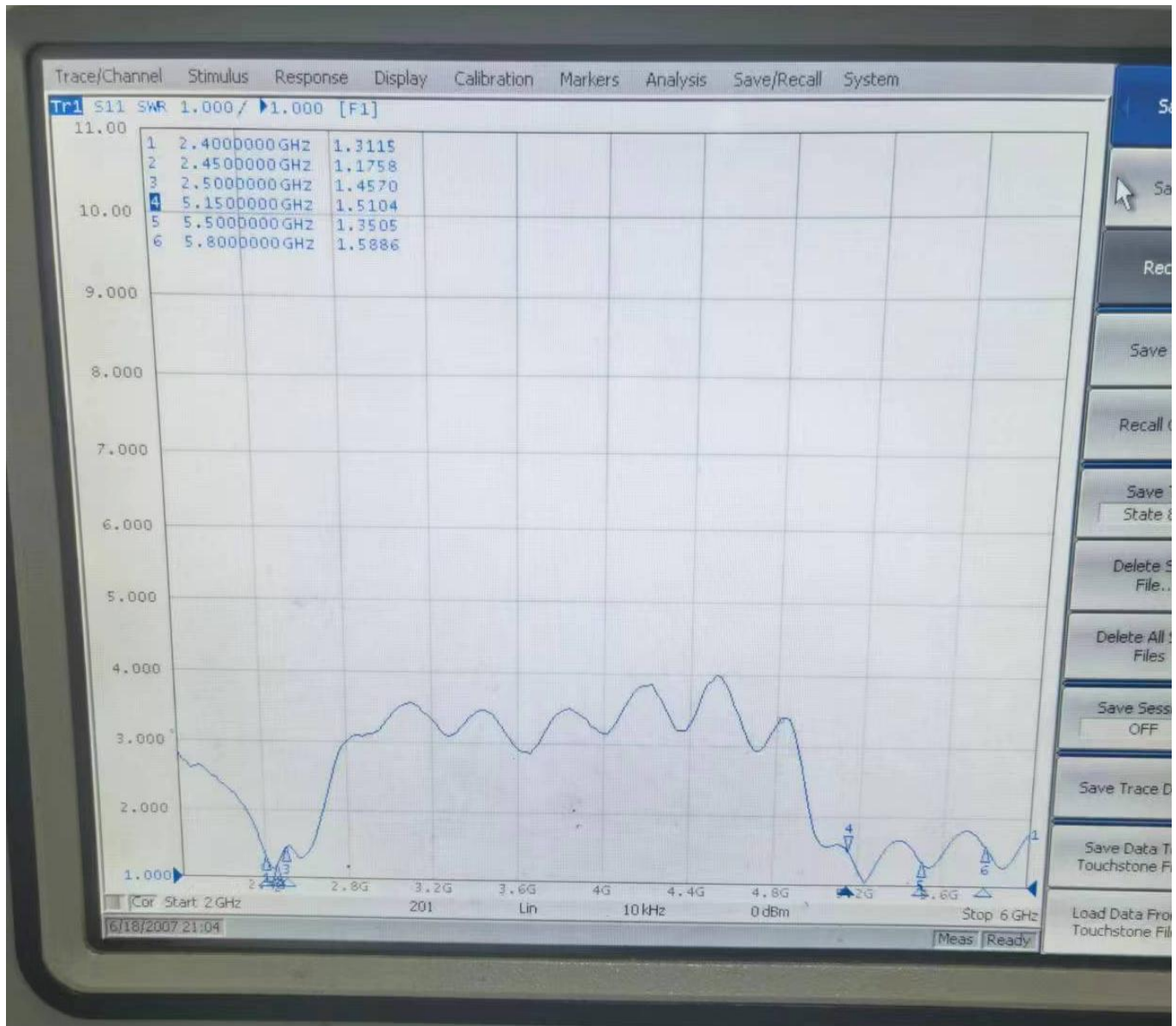
Electrical Specifications	
Frequency Range	2400-2500/5150-5850MHz
VSWR	≤2.0
GAIN	≤3.65 DBI
Radiation	OMNI
Polarizatin	LINEAR
Input Impedance	50 Ω
Mechanical Specifications	
Input connector	IPEX-1
Antenna materia	ABS+UV
Working Temperature	-30°C~+80°C
Working Humidity	40~85%

2、Antenna structure size diagram



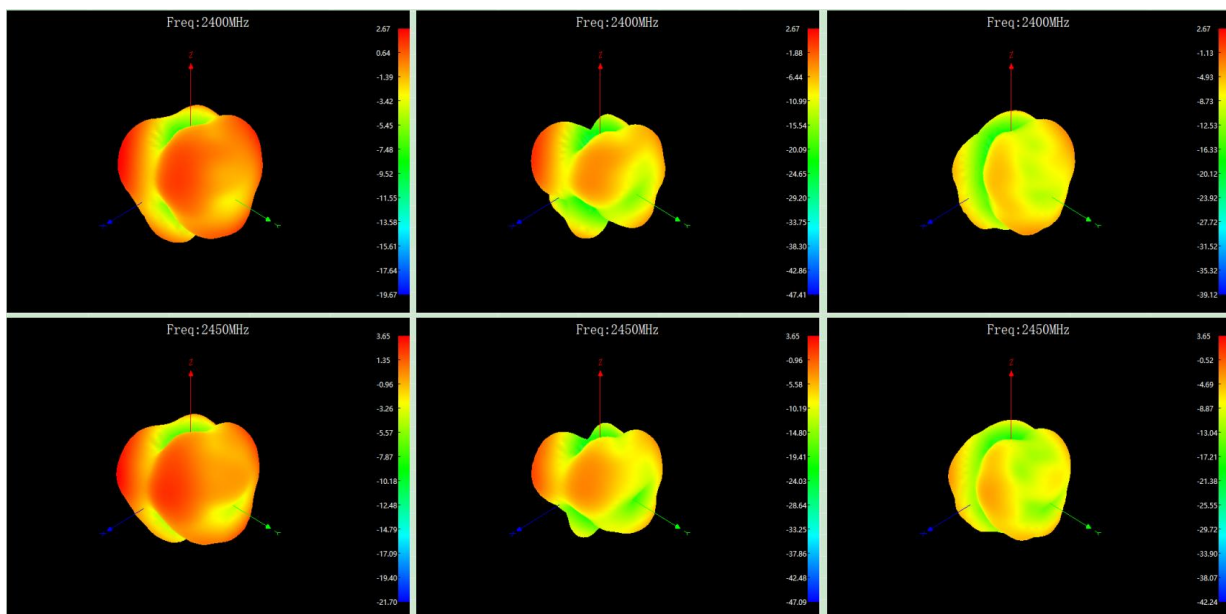
3. Passive test data

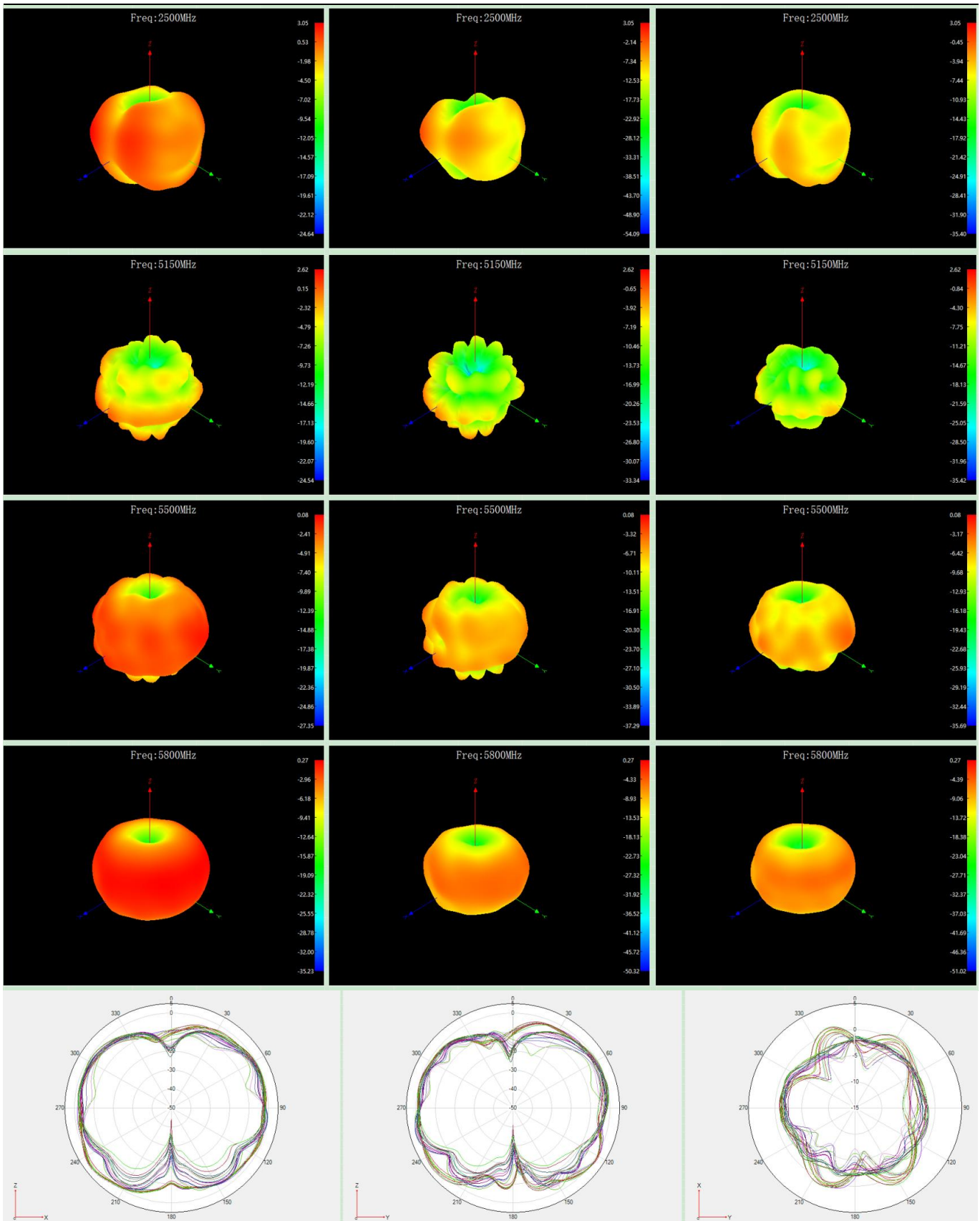
Zapato, Peru:



Passive efficiency gain:

Frequency/Mhz	Efficiency / %	MaxGain/dBi
2400	60.26	2.67
2410	55.85	2.52
2420	60.26	3.02
2430	63.53	3.3
2440	58.88	2.88
2450	67.14	3.65
2460	58.61	2.92
2470	62.23	3.33
2480	61.09	3.03
2490	63.1	3.27
2500	63.39	3.05
5000	42.76	2.62
5200	41.02	2.59
5250	44.57	2.49
5300	48.19	2.08
5350	41.88	1.25
5400	46.45	0.84
5450	45.19	0.43
5500	45.6	0.08
5550	46.67	0.69
5600	45.92	0.35
5650	47.21	0
5700	43.15	-0.38
5800	46.03	0.27
5850	45.39	0.01

directional diagram :



4、Reliability test report

test item; test project		test method	ask	bear fruit
C1	V. S. W. R.	Design netanalyzer parameters for testing	Directive DUT specification	pass
M1	antenna gain	Design the parameters of the antenna dark chamber for testing	Directive DUT specification	pass
M2	Vibration	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80to 20 Hz3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol. ≤5%	pass
M6	Random Drop	GB / T2423.8-1995 Single: Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated 、 fracture 2. Frequency Tol. ≤5%	pass
E3	Dimension	Inspection of dimension, color, material, package, surface process.	Directive DUT specification	pass
E4	Temperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H 温度 80°C	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5%	pass
E5	Thermal Shock	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80°C (30 minutes); Cycles:24-40°C	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5%频率偏移 ≤5%	pass
R1	Aging test	GB /T 2423.2-2008 Temp: 80°C; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5%	pass
M1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2015/863/EU	pass

5. Product packaging specifications

Product name / specification:

1、 labeling requirement

Purchase order number	*****
material code	*****
Product name specification	*****
Quantity	*****
remarks	*****

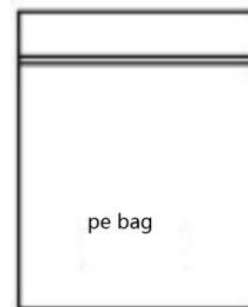
Purchase order number	*****
material code	*****
Product name specification	*****
Quantity	*****
remarks	*****

2、 The packing requirements

job description :

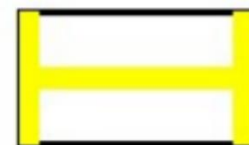
1). inner packing:

Product____PCS in a small bag



2). external packing:

Determine the quantity / box according to the actual quantity



carton

3、 matters need attention:

- 1). Whether to add a partition board, pearl cotton;
- 2). Attachment of labels, such as ROHS;

